

# EXHIBIT C

CURRICULUM VITAE  
SAMANTHA J. PULLIAM, M.D.

**Personal Information**

Business Address:



Home Address:



**Board Certifications and Licensure**

2015-present	North Carolina Medical Licensure
2013-present	Certification, Female Pelvic Medicine and Reconstructive Surgery, American Board of Obstetrics and Gynecology
2006-present	Diplomate, American Board of Obstetrics and Gynecology
2006-present	Certification, Obstetrics and Gynecology, American Board of Obstetrics and Gynecology
2003-present	Massachusetts Board of Registration in Medicine
2000-present	National Board of Medical Examiners

**Education**

2015	Value-Based Healthcare, Harvard Medical School
2014	Executive Leadership Program in Health Policy and Management
2013	Clinical Process Improvement Program, Massachusetts General Hospital/ Partners Healthcare
09/05-06/06	Fellow, Medical Education, Mount Auburn Hospital
07/03-06/06	Fellow, Female Pelvic Medicine and Reconstructive Surgery, Mount Auburn Hospital
07/02-06/03	Resident, Obstetrics and Gynecology, Massachusetts General Hospital/ Brigham and Women's Hospital
07/00-06/01	Resident, Obstetrics and Gynecology, Boston Medical Center
07/99-06/00	Intern, Obstetrics and Gynecology, Medical College of Ohio
07/98-06/99	Intern, Anatomic Pathology, Massachusetts General Hospital
1994 -1998	MD, Medicine, Wake Forest University School of Medicine
1986 -1990	BS, Biology, Duke University

**Professional Experience – Employment History**

02/16-present	Assistant Professor of Obstetrics and Gynecology, and Division Director for Urogynecology and Pelvic Reconstructive Surgery UNC at Chapel Hill School of Medicine
11/12-12/15	Assistant Professor of Obstetrics, Gynecology, and Reproductive Biology,

	Harvard Medical School
03/11-12/15	Director, Fellowship in Female Pelvic Medicine and Reconstructive Surgery, Massachusetts General Hospital
08/08-05/10	Active Staff, Obstetrics and Gynecology, York Hospital
10/07-12/11	Associate Residency Director, Integrated Program in Obstetrics and Gynecology, Massachusetts General Hospital/ Brigham and Women's Hospital
08/06-12/15	Assistant in Gynecology, Gynecology and Obstetrics, Massachusetts General Hospital
08/06-12/15	Associate Director, Urogynecology and Pelvic Reconstructive Surgery, Massachusetts General Hospital
08/06-11/12	Instructor in Obstetrics, Gynecology, and Reproductive Biology, Harvard Medical School
07/02-06/03	Administrative Chief Resident, Obstetrics and Gynecology, Massachusetts General Hospital/ Brigham and Women's Hospital

#### **Honors & Awards**

2010	Partners in Excellence for Administrative Contribution, Massachusetts General Hospital
2004	3 <sup>rd</sup> Price Poster for Research, American Association of Gynecologic Laparoscopists
2003	Partners in Excellence for Administrative Contribution, Brigham and Women's Hospital
2001	Certificate of Excellence in Teaching, Boston Medical Center
2001	Berlex Teaching Award, Boston Medical Center
1999	Certificate of Excellence in Teaching, Medical College of Ohio

#### **Bibliography and products of scholarship**

##### **Books and Chapters**

1. Silveira S and Pulliam SJ. (2013) Pelvic floor muscle pain and dysfunction. In Bailey A and Bernstein C (Eds) *Pain in Women: A clinical guide* (chapter 3, p 143-154):Springer.

##### **Refereed Papers/Articles**

1. Foust-Wright CE, Pulliam SJ, Batalden RP, Berk TK, Weinstein MM, Wakamatsu MM, Phillippe M. Hormone Modulation of Toll-Like Receptor 5 in Cultured Human Bladder Epithelial Cells. *Reprod Sci*. 2016 Sep 20. pii: 1933719116667489. [Epub ahead of print] PMID: 27651177.
2. Foust-Wright C, Hudson P, Pulliam S. Quality Measures for Prolapse Management *Curr Obstet Gynecol Rep* 2016 Jun 5(2):152-7.
3. Hawkins AT, Olariu AG, Savitt LR, Gingipally S, Wakamatsu MM, Pulliam S, Weinstein MM, Bordeianou L. Impact of Rising Grades of Internal Rectal Intussusception on Fecal Continence and Symptoms of Constipation. *Dis Colon Rectum*. 2016 Jan;59(1):54-61.
4. Pulliam SJ, Morgan DM, Guaderrama N, Guire K, Adam RA. Differences in Patterns of Preoperative Assessment Between High, Intermediate, and Low Volume Surgeons When Performing Hysterectomy for Uterovaginal Prolapse. *Female Pelvic Med Reconstr Surg*. 2016 Jan-Feb;22(1):7-10.
5. Morgan DM, Pulliam S, Adam RA, Swenson C, Guire K, Kamdar N, Guaderrama N. Analysis of High-, Intermediate-, and Low-Volume Surgeons When Performing Hysterectomy for Uterovaginal Prolapse. *Female Pelvic Med Reconstr Surg*. 2016 Jan-Feb;22(1):43-50.

6. Hawkins AT, Olariu AG, Savitt LR, Gingipally S, Wakamatsu MM, **Pulliam S**, Weinstein MM, Bordeianou L. Impact of Rising Grades of Internal Rectal Intussusception on Fecal Continence and Symptoms of Constipation. *Dis Colon Rectum*. 2016 Jan;59(1):54-61.
7. Bordeianou L, Hicks CW, Olariu A, Savitt L, **Pulliam SJ**, Weinstein M, Rockwood T, Sylla P, Kuo J, Wakamatsu M. Effect of Coexisting Pelvic Floor Disorders on Fecal Incontinence Quality of Life Scores: A Prospective, Survey-Based Study. *Dis Colon Rectum*. 2015 Nov;58 (11):1091-7.
8. Batalden RP, Weinstein MM, Foust-Wright C, Alperin M, Wakamatsu MM, **Pulliam SJ**. Clinical application of the IUGA/ICS classification system for mesh erosion. *Neurourol Urodyn*. 2015 Apr 14.
9. Unger CA, McKinney JL, Weinstein MM, **Pulliam SJ** Pelvic Floor Muscle Evaluation Findings in Patients With Urinary Incontinence. *Journal of Women's Health Physical Therapy*. 38(2):90-94, May/August 2014.
10. Hicks CW, Weinstein M, Wakamatsu M, Savitt L, **Pulliam S**, Bordeianou L. In patients with rectoceles and obstructed defecation syndrome, surgery should be the option of last resort. *Surgery*. 2014 Apr;155(4):659-67.
11. **Pulliam, SJ**. The trouble with trabeculation. *Menopause*. 2013 Aug;20(8):800-1
12. Hicks CW, Weinstein M, Wakamatsu M, **Pulliam S**, Savitt L, Bordeianou L. Are rectoceles the cause or the result of obstructed defecation syndrome? A prospective anorectal physiology study. *Colorectal Dis*. 2013 Aug;15(8):993-9. doi: 10.1111/codi.12213.
13. Lau T, Weinstein M, Wakamatsu M, Macklin EA and **Pulliam S**. Low back pain does not improve with surgical treatment of pelvic organ prolapse. *Int Urogynecol J*. 2013 Jan;24(1):147-53. doi: 10.1007/s00192-012-1797-9. Epub 2012 May 23.
14. **Pulliam SJ**, Weinstein DF, Malhotra A, Macklin EA, Berkowitz LR. Baseline sleep dysfunction among matriculating interns. *J Grad Med Educ*. 2012 Jun;4(2):202-8. doi: 10.4300/JGME-D-11-00153.1.
15. **Pulliam SJ**, Weinstein MM, Wakamatsu MM. Minimally-invasive Apical Sacropexy: A retrospective review of laparoscopic and robotic operating room experiences. *Female Pelvic Medicine and Reconstructive Surgery. Female Pelvic Med Reconstr Surg*. 2012 Mar-Apr;18(2):122-6. doi: 10.1097/SPV.0b013e31824a3995.
16. Link CL, **Pulliam SJ**, McKinlay JB. Hysterectomies and Urologic Symptoms: Results from the Boston Area Community Health (BACH) Survey. *Female Pelvic Med Reconstr Surg*. 2010 Jan;16(1):37-47.
17. **Pulliam SJ**, Berkowitz LR. Smaller pieces of the hysterectomy pie: current challenges in resident surgical education. *Obstet Gynecol*. 2009 Feb;113(2 Pt 1):395-8
18. Hall SA, Link CL, **Pulliam SJ**, Hanno PM, Eggers PW, Kusek JW, McKinlay JB. The relationship of common medical conditions and medication use with symptoms of painful bladder syndrome: results from the Boston area community health survey. *J Urol*. 2008 Aug;180(2):593-8. doi: 10.1016/j.juro.2008.04.002. Epub 2008 Jun 12.
19. **Pulliam SJ**. Fracture and prolapse: is there a connection? *Menopause*. 2008 Jan-Feb;15(1):14-5.
20. Link CL, **Pulliam SJ**, Hanno PM, Hall SA, Eggers PW, Kusek JW, McKinlay JB. Prevalence and psychosocial correlates of symptoms suggestive of painful bladder syndrome: results from the Boston area community health survey. *J Urol*. 2008 Aug;180(2):599-606. doi: 10.1016/j.juro.2008.04.009. Epub 2008 Jun 12.
21. **Pulliam SJ**, Ferzandi TR, Hota LS, Elkadry EA, Rosenblatt PL. Use of synthetic mesh in pelvic reconstructive surgery: a survey of attitudes and practice patterns of urogynecologists. *Int Urogynecol J Pelvic Floor Dysfunct*. 2007 Dec;18(12):1405-8. Epub 2007 Apr 25.

22. Rosenblatt P, **Pulliam S**, Edwards R, Boyles SH. Suprapubically assisted operative cystoscopy in the management of intravesical TVT synthetic mesh segments. *Int Urogynecol J Pelvic Floor Dysfunct*. 2005 Nov-Dec;16(6):509-11. Epub 2005 Feb 26.
23. Conti JA, Kemeny NE, Saltz LB, Huang Y, Tong WP, Chou TC, Sun M, **Pulliam S**, Gonzalez C. Irinotecan is an active agent in untreated patients with metastatic colorectal cancer. *J Clin Oncol*. 1996 Mar;14(3):709-15.
24. Kemeny N, Conti JA, Cohen A, Campana P, Huang Y, Shi WJ, Botet J, **Pulliam S**, Bertino JR. Phase II study of hepatic arterial floxuridine, leucovorin, and dexamethasone for unresectable liver metastases from colorectal carcinoma. *J Clin Oncol*. 1994 Nov;12(11):2288-95.

## **Published Abstracts**

### *Peer-Reviewed Oral presentations*

1. Foust-Wright CE, Wakamatsu M, Johnson A, Weinstein M, Pulliam SJ Decreasing length of stay through quality improvement cycles. Society of Gynecologic Surgeons, Palm Springs, CA 2016 *Am J Obstet Gynecol* 2016;214(4) S471.
2. Foust-Wright CE, Weinstein MM, **Pulliam SJ**, Batalden RP, Wakamatsu MM, Berk TK, Phillippe M. Effect of estradiol and progesterone on toll-like receptor 5 in cultured human bladder epithelial cells. American Urogynecologic Society, Seattle, WA, 2015. [Abstract] *Female Pelvic Med Reconstr Surg* 2015 Sept/Oct; (5 Supp1):S35.
3. Johnson AM, **Pulliam SJ**, Foust-Wright CE, Bordeianou L, Savitt L, Weinstein Rectoceles: Is there a correlation between clinical exam and radiographic findings in symptomatic women? A retrospective Study. American Urogynecologic Society, Seattle WA, 2015 [Abstract] *Female Pelvic Med Reconstr Surg* 2015 Sept/Oct; (5 Supp 1):S53.
4. Foust-Wright CE, **Pulliam S**, Batalden R, Berk T, Weinstein M, Wakamatsu M, Phillippe M. Hormone Modulation of toll-like receptor 5 in cultured human bladder epithelial cells. International Continence Society, Montreal, Canada 2015. [Abstract] *Neurourol Urodynam* 2015 Aug; (34 S3):S369-70.
5. Johnson AM, **Pulliam SJ**, Foust-Wright CE, Bordeianou L, Savitt L, Wakamatsu MM. Relationship between radiographic and clinical rectoceles in women with constipation: Is there a disease continuum? International Urogynecologic Association, Nice, France, 2015. [Abstract] *Int Urogynecol J*. 2015 June; 26 supp 1):S16.
6. Posthuma RL, **Pulliam SJ**, Foust-Wright CE, Weinstein MM, Wakamatsu MM, Kaimal AJ. Pelvic floor muscle training versus retropubic midurethral sling as the Initial treatment for stress urinary incontinence: a decision analysis. American Urogynecology Association/International Urogynecologic Association Washington, DC. 2014 [Abstract] *Female Pelvic Med Reconstr Surg* 2014;20(4): S86.
7. Posthuma RL, **Pulliam SJ**, Berkowitz LB, Burke TK, Foust-Wright CE, Weinstein MM, Wakamatsu MM, Phillippe M. Estradiol and progesterone modulate toll-like receptor 4 in cultured human bladder epithelial cells. American Urogynecology Association/International Urogynecologic Association Washington, DC 2014 [Abstract] *Female Pelvic Med Reconstr Surg* 2014;20(4):S49.
8. Posthuma R, Weinstein MM, Iyer S, Alperin M, Wakamatsu MM, **Pulliam SJ**. Clinical Usefulness of IUGA/ICS classification system in women with mesh erosion. American Urogynecologic Society Las Vegas, NV, 2013. [Abstract] *Female Pelvic Med Reconstr Surg* 2013;19(5):S72.
9. Unger C, Weinstein MM, McKinney J, **Pulliam S** Pelvic floor muscle evaluation in patients with myofascial pain syndrome. American Urogynecologic Association, Chicago, IL 2012. [Abstract] *Female Pelvic Med Reconstr Surg* 2012;18(8 supp1) S81-2.
10. Sylla P, Wakamatsu MM, **Pulliam S**. Vaginal-assisted laparoscopic rectosigmoid resection with transvaginal rectopexy and extraction for rectal prolapse. American

- Urogynecologic Association, Providence, RI 2011 [Abstract] Female Pelvic Med Reconstr Surg 2011;17(5 Suppl 1):S102.
11. Weinstein MM, **Pulliam SJ**, Wakamatsu MM. Robotic and Laparoscopic Apical Sacropexy: Comparison of operative characteristics. American Urogynecologic Association, Long Beach, CA. 2010 [Abstract] Female Pelvic Med Reconstr Surg 2010;16(5 Suppl 2):S87.
  12. **Pulliam SJ**, Chelmow D, Weld AW, Rosenblatt PL. Laparoscopic Paravaginal Repair: A case series. International Urogynecologic Association, Copenhagen, Denmark 2005 [Abstract] Int Urogynecol J 2005; 16 (suppl 2):S122-3 .
  13. **Pulliam SJ**, Chelmow D, Weld AW, Rosenblatt PL. Reduced voiding dysfunction after TVT sling using a novel babcock tensioning technique. American Urogynecologic Association, Atlanta, GA. 2005. [Abstract] Female Pelvic Med Reconstr Surg 2005;11(Suppl 1) S25.
  14. **Pulliam SJ**, Weld AS, Rardin CR, Rosenblatt PL. Retrospective case series of laparoscopic sacrocervicopexy. American Association of Gynecologic Laparoscopists, San Francisco, CA.[Abstract] 2004 J of AAGL 2004;11(3 Suppl):S37.
  15. Rosenblatt PL, Elkadry E, **Pulliam SJ**. Laparoscopic sacrocolpopexy utilizing synthetic mesh from previous failed prolapse surgery American Association of Gynecologic Laparoscopists, San Francisco, CA. 2004. J of AAGL 2004;11(3 Suppl):S94.

*Poster presentations*

1. Transitioning to Blunt Suture Needles in Obstetric Operating Rooms: Results from a quality improvement project. Foust-Wright C, Johnson A, **Pulliam S**. American College of Obstetrics and Gynecology, Washington DC 2016 [Abstract] Obstet Gynecol 2016;127(5):59S.
2. Thomson AP, Foust-Wright CE, Posthuma RL, Wakamatsu MM, **Pulliam SJ**, Weinstein MM. Predictors for voiding trial failure after minimally invasive sacrocolpopexy. American Urogynecologic Association/International Urogynecology Association, Washington DC 2014 [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2014;20(4):S303.
3. Foust-Wright CE, Posthuma RL, Thomson AP, Weinstein MM, Wakamatsu MM, **Pulliam SJ**. Predictors for length of stay following vaginal hysterectomy for pelvic organ prolapse. American Urogynecologic Association/International Urogynecology Association, Washington DC 2014. Female Pelvic Medicine and Reconstructive Surgery 2014;20(4):S271-2.
4. Napoe GS, Foust-Wright CE, Posthuma RL, **Pulliam SJ**. Confidence in the repair of obstetric anal sphincter injuries by attending obstetricians and gynecologists. American Urogynecologic Association/International Urogynecology Association, Washington DC 2014 [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2014;20(4):S234-5.
5. **Pulliam SJ**, Morgan DM, Adam RA, Guire K, Guaderraman N. A multicenter collaborative study to evaluate the effect of surgeon volume on preoperative assessment and concomitant surgery for hysterectomy for pelvic organ prolapse. American Urogynecologic Association, Las Vegas, NV 2013 [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2013;19(5):S11.5.
6. Morgan DM, **Pulliam SJ**, Adam RA, Swenson C, Guire K, Guaderrama N. A multicenter, collaborative analysis of the differences in practice patterns between high, intermediate and low volume surgeons when performing hysterectomy for prolapse. American Urogynecologic Association, Las Vegas, NV 2013 [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2013;19(5):S104.

7. Posthuma R, Weinstein MM, Wakamatsu MM, Bordeianou L, Savitt L, **Pulliam SJ**. Interaction of constipation and urinary dysfunction in women. American Urogynecologic Association, Las Vegas, NV 2013 [Abstract] Female Pelvic Medicine & Reconstructive Surgery 2013;19(4):S33.
8. Weinstein MM, Wakamatsu MM, Bordeianou L, Savitt L, **Pulliam S**. American Urogynecologic Association, Las Vegas, NV 2013 [Abstract] Urinary symptoms in women with constipation. Female Pelvic Medicine & Reconstructive Surgery 2013;19(4):S133.
9. Silveira S, **Pulliam SJ**, Wakamatsu MM, Weinstein, MM. Tips and tricks for the removal of a pessary incarcerated in the bladder: A minimally invasive technique. American Urogynecologic Association, Providence RI, 2011 [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2011;17(5): S174.
10. Silveira S, Grottgau BE, **Pulliam SJ**, Vrahas MS. Pelvic Reconstruction with outlet expansion to allow intercourse in a patient with caudal regression syndrome. American Urogynecologic Association, Providence RI [Abstract] Female Pelvic Medicine and Reconstructive Surgery 2011;17(5):S181.
11. Lau TC, Weinstein MM, Wakamatsu MM, **Pulliam SJ**. Lower back pain does not improve with surgical treatment of pelvic organ prolapse. American Urogynecologic Society Long Beach, CA 2010 [Abstract] Female Pelvic Medicine and Reconstructive Surgery. 2010;16(5):S133.
12. Weinstein MM, **Pulliam SJ**, Wakamatsu MM. Robotic and Apical Sacropexies: Comparison of operative characteristics. American Urogynecologic Society Long Beach, CA 2010 [Abstract] Female Pelvic Medicine and Reconstructive Surgery. 2010;16(5):S87.
13. **Pulliam SJ** Ferzandi TR Hota LS Elkadry EE Rosenblatt, PL . Use of Synthetic Mesh in Pelvic Reconstructive Surgery: A Survey of Attitudes and Practice Patterns of Urogynecologists. American Urogynecologic Association, Palm Springs, CA, October 2006 [Abstract] Int Urogynecol J Pelvic Floor Dysfunct 2006. 2006;17 sup9:S457.
14. **Pulliam SJ**, Chelmow D, Weld AW, Rosenblatt PL. Voiding Dysfunction in Patients with TVT Slings Adjusted Using an Alternative Method of Tensioning. American Urogynecologic Association, Atlanta GA 2005 [Abstract] Int Urogynecol J. 2005;16(Supplement 2):S123.
15. **Pulliam SJ**, Chelmow D, Weld AS, Rosenblatt PL. Laparoscopic Paravaginal Repair: A Case Series. American Urogynecologic Association, Atlanta GA 2005 [Abstract] Int Urogynecol J. 2005;16(Suppl 2):S122.
16. **Pulliam S**, Rardin C, Rosenblatt P. Laparoscopic Sacrocolpopexy and Abdominal Sacrocolpopexy: A retrospective comparison. American Association of Gynecologic Laparoscopists, San Francisco, CA. 2004. [Abstract] J of AAGL 2004;11(3):S84.

#### **Refereed unpublished oral presentations and/or abstracts**

##### Peer-Reviewed Poster Presentations

1. Pulliam SJ, Weinstein DA, Macklin E, Berkowitz LR. Sleep dysfunction among medical trainees: Is this part of the problem? CREOG and APGO Annual Meeting, Orlando FL, 2010

#### **Products of creative activity**

1. International Patent Application WO 2011/037837A2 filed march 31, 2011/ [www.wipo.int/pctdb](http://www.wipo.int/pctdb) My colleague and I developed a novel method for performing a sacrocolpopexy (vaginal vault suspension) via a vaginal approach, using a novel device.

**Teaching Activities****Lectures**

<b>DATES</b>	<b>LEARNERS</b>	<b>PRESENTATION TOPIC</b>	<b>FREQUENCY</b>
2014-2015 Mass Gen	3 Urogyn Fellows 3 REI Fellows 3 GYN Onc Fellows 3 MFM Fellows	Quality Improvement for OB/GYN Fellows	90 minute session annually
2012-2015 Mass Gen	3 Urogyn Fellows	Clinical outcomes in FPMRS	60 minutes annually
2006-2015 Mass Gen	3 Urogyn Fellows 15 OB/GYN Residents	Urogynecology Simulation – Minimally invasive Slings	180 minutes annually
2003-2015 Mass Gen	6-8 3 <sup>rd</sup> year Medical Students	Pelvic Organ Prolapse and Urinary Incontinence	60 minutes twice annually

**Grand Rounds***Outside of UNC- Regional/National Presentations*

2016	Updates on Treatment of Urgency Incontinence OB/GYN Department, New Hanover Hospital, Wilmington, NC
2015	Update in the Treatment of Female Urinary Incontinence OB/GYN Department, North Shore Medical Center, Salem, MA
2015	Is it a Rectocele? Reading, PA
2014	Update in the Treatment of Female Urinary Incontinence Family Practice Department, North Shore Medical Center, Salem, MA
2014	Update in the Treatment of Female Urinary Incontinence Pentucket Medical Associates, Haverhill, MA
2011	Update in the Treatment of Female Urinary Incontinence North Shore Medical Center, Salem, MA
2011	Pelvic Organ Prolapse: What a Mesh! Boston Medical Center, Boston, MA
2009	Update on Urinary Incontinence Treatment in Women Harvard University Health Services, Cambridge, MA
2009	Pelvic Floor Disorders in Gynecology Boston Medical Center, Boston, MA
2008	Pelvic Organ Prolapse; Do you know it when you see it? Massachusetts General Hospital, Boston, MA
2004	Slings and Things: Treatments for Stress Urinary Incontinence Boston Medical Center, Boston, MA
2003	Dermatomyositis and Ovarian Cancer Brigham & Women's Hospital, Boston, MA

2001 Anal Sphincter Lacerations  
Salem Hospital, Salem, MA

**Continuing Education Lecture**

*Outside of UNC*

2015 Vaginal Hysterectomy  
52<sup>nd</sup> Annual Update in Obstetrics and Gynecology  
Harvard Medical School Continuing Medical Education, Boston, MA

2010-2015 Surgical repair of pelvic organ prolapse  
Topics in Contemporary Obstetrics and Gynecology  
Massachusetts General Hospital  
Harvard Medical School Continuing Medical Education, Boston, MA

2010 Use of Mesh in Pelvic Reconstructive Surgery  
Brigham & Women's Hospital  
Harvard Medical School Continuing Medical Education, Boston, MA

2009 Cystoscopy and Suburethral Slings  
Update in Minimally Invasive Gynecologic Surgery  
Brigham & Women's Hospital  
Harvard Medical School Continuing Medical Education, Boston, MA

2009 What Urodynamics can do for your patients... and for you!  
Update in Minimally Invasive Gynecology Surgery  
Brigham & Women's Hospital  
Harvard Medical School Continuing Medical Education, Boston, MA

2009 Truths and Myths in Minimally Invasive Urogynecology  
Updates in OB/GYN  
Boston Medical Center, Cambridge, MA

2008 Myofascial Pelvic Pain  
Sex, Gender and Pain: Dilemmas in Clinical Practice  
Spaulding Rehabilitation Hospital  
Harvard Medical School Continuing Medical Education, Boston, MA

2004 Considerations of the Anterior Abdominal Wall in Laparoscopic Surgery  
New England Association of Gynecologic Laparoscopists  
Mount Auburn Hospital, Cambridge, MA

2004 Urinary Tract Infections and Hematuria: When to Worry  
Mount Auburn Hospital Quarterly Seminar, Framingham, MA

*Roundtables and Workshops*

2016 Improving Postoperative Outcomes in Gynecology: Measuring Quality  
American College of Obstetrics and Gynecology, Washington DC

2015 Defining Your Value Through Quality Measurement and Improvement  
American Urogynecologic Society, Seattle WA

2013 Introduction to Quality Measurement and an Overview of the AUGS  
"Value" Study, American Urogynecologic Society, Chicago IL

**Research Mentorships**

<b>MENTEE</b>	<b>DATES</b>	<b>CURRENT POSITION</b>
<b>Fellows, Female Pelvic Medicine and Reconstructive Surgery, Massachusetts General Hospital</b>		
<b>Rebecca P. Batalden MD</b>	July 2012– June 2015	Attending Physician, The Oregon Clinic, Portland OR
Project Title:	Clinical Application of the IUGA/CS classification system for mesh erosion	
Publications:	Neurourol Urodyn. 2015 Apr 14. doi: 10.1002/nau.22756.	
Presentations:	Oral presentation at The American Urogynecologic Society Las Vegas, NV, 2013	
Project Title:	Estradiol and progesterone modulate toll-like receptor 4 in cultured human bladder epithelial cells	
Presentations:	Oral presentation at the American Urogynecology /International Urogynecologic Association Washington, DC 2014	
Project Title:	Pelvic floor muscle training versus retropubic midurethral sling as the Initial treatment for stress urinary incontinence: a decision analysis.	
Presentations:	Oral presentation at the American Urogynecology Association/International Urogynecologic Association Washington, DC. 2014	
Project Title:	Interaction of constipation and urinary dysfunction in women	
Presentations:	Oral presentation at American Urogynecologic Association, Las Vegas, NV 2013	
<b>Caroline Foust-Wright MD</b>	July 2013 - present	Current 3 <sup>rd</sup> year fellow, Massachusetts General Hospital , Boston, MA
Project Title:	Effect of estradiol and progesterone on toll-like receptor 5 in cultured human bladder epithelial cells.	
Presentations:	Oral presentation at the American Urogynecologic Society, Seattle, WA, 2015 Oral presentation at International Continence Society, Montreal, Canada , 2015	
Project Title:	Predictors for length of stay following vaginal hysterectomy for pelvic organ prolapse	
Presentations:	Poster presentation at American Urogynecologic Association/International Urogynecology Association, Washington DC 2014	
<b>Angel Johnson, MD</b>	July 2014 - present	Current 2 <sup>nd</sup> year fellow, Massachusetts General Hospital, Boston, MA
Project:	Rectoceles: Is there a correlation between clinical exam and radiographic findings in symptomatic women? A retrospective Study.	
Presentations:	Oral presentation at the American Urogynecologic Society, Seattle WA, 2015 Oral presentation at the International Urogynecologic Association, Nice, France, 2015	

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**Residents, Obstetrics and Gynecology, Massachusetts General Hospital****Sarah Napoe, MD**

July 2013-present

4<sup>th</sup> year resident, Brigham  
and Women's/  
Massachusetts General  
Hospital OB/GYNProject: Confidence in the repair of obstetric anal sphincter injuries by attending obstetricians and  
gynecologists.Presentations: Poster presentation at the American Urogynecologic Association/International Urogynecology  
Association, Washington DC 2014

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**Cecile Unger, MD**

July 2010-June 2012

Assistant Professor,  
Cleveland Clinic,  
Cleveland OH

Project: Pelvic Floor Muscle Evaluation Findings in Patients With Urinary Incontinence

Publication: Journal of Women's Health Physical Therapy. 38(2):90-94, May/August 2014.

Presentations: American Urogynecologic Association, Chicago, IL 2012

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**Sharon Silveira, MD**

July 2010-July 2012

Assistant Professor,  
Dartmouth-Hitchcock  
Medical School, Hanover,  
NH

Project: A minimally invasive technique to remove pessaries incarcerated in the bladder

Presentations: Poster presentation at the American Urogynecologic Association, Providence RI

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**Trevin Lau, MD**

July 2008-July 2010

Instructor, Harvard  
Medical School, Boston  
MA

Project: Low back pain does not improve with surgical treatment of pelvic organ prolapse.

Publication: Int Urogynecol J. 2013 Jan;24(1):147-53. doi: 10.1007/s00192-012-1797-9.

Presentation: Poster presentation at American Urogynecologic Society Long Beach, CA 2010

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**Clinical Teaching****Preceptorships (Massachusetts General Hospital)**2006-2015 Ambulatory Urogynecology Clinic Preceptor  
3<sup>rd</sup> year Obstetrics and Gynecology Residents  
1 monthly session  
Massachusetts General Hospital**Attending on Clinical Service (Massachusetts General Hospital)**2006-2014 Ward attending, Benign Gynecology  
Obstetrics and Gynecology Residents

2 weeks annually  
 2011-present Attending Physician, FPMRS  
 FPMRS Fellows  
 48 Weeks annually

### **Graduate Supervision, Committees**

### **Other Supervision**

### **Grants**

#### *Active*

2014- AUGS Quality Improvement Outcomes Research Network  
 American Urogynecologic Society  
 Site PI ( Total Direct Cost: \$10,000 FTE 0%)  
 To evaluate quality measures appropriate for FPMRS providers

#### *Completed*

2013-2014 Practice patterns of specialists treating pelvic organ prolapse  
 American Urogynecology Foundation Research Grant  
 Site PI (Total Direct Cost: \$6,500 FTE 0%)  
 To evaluate differences in practice patterns among surgeons who perform  
 hysterectomy for pelvic organ prolapse repair.

### **Professional Service**

#### **To discipline**

#### *National Committee Appointments*

2015-present Council Chair, Quality Outcomes, Quality Network and Quality Registry  
 Committees. American Urogynecologic Society (AUGS)  
 2015-2015 Chair, Quality Outcomes Committee, (AUGS)  
 2015-present Member, Task force for Alternative Payment Models, AUGS  
 2012-2015 Vice Chair, Quality Outcomes Committee, AUGS  
 2012-2013 AUGS Leadership Program  
 2010-2012 Member, Health Policy Committee, AUGS

#### *Peer reviewer*

2006-present Menopause  
 Ad Hoc Reviewer  
 2010-present Journal of Minimally Invasive Gynecology  
 Ad Hoc Reviewer  
 2010-present International Urogynecology Journal  
 Ad Hoc Reviewer

#### *Society Memberships*

2013-2014 American College of Surgeons  
 2002- present American Urogynecologic Society  
 1999-present American College of Obstetricians and Gynecologists  
 2004-present AAGL

### Research Statement

My decision to pursue subspecialty training in female pelvic medicine and reconstructive surgery (FPMRS) stemmed from a desire to provide surgical correction for women with pelvic organ prolapse and stress urinary incontinence. My fellowship training was influenced by the creativity and curiosity of my fellowship director, whose commitment to developing novel techniques and new approaches for more familiar procedures became a theme of my training. I learned progressive approaches to prolapse repair surgery (at the time laparoscopic sacrocolpopexy was a rare skill) and was able to experience many newer ways of placing mesh such as so-called “vaginal mesh” kits. Identifying the needs of patients and developing new ideas to meet these needs has been a motivation in my research, leading to the submission of a patent application for a novel approach to prolapse repair surgery. However, understanding that new technique development was essential for progress, I also learned that there was little within the subspecialty of FPMRS that defined standards or quality of care.

Following my fellowship, I returned to Massachusetts General Hospital (where I completed my OB/GYN residency) to pursue a career in academic medicine. At about that time, the Food and Drug Administration released the first of several warnings about the use of vaginal mesh for pelvic organ prolapse repair. Increasingly, my clinical practice was filled by patients with pain or erosions arising from the placement of mesh for prolapse repair. Again, I was confronted with questions about the quality and safety of care provided by surgeons within my own specialty. Since this time my research efforts have focused on quality of care in FPMRS. **It is my goal to identify procedures and processes that provide optimal care for women with pelvic floor disorders who may undergo pelvic reconstructive surgery, and to define these in such a way that patients and physicians can understand choices that provide the safest and most effective outcomes for women across the lifespan.**

To this end, I was a site investigator for a multi-centered initiative sponsored by the American Urogynecologic Society evaluating the value of a Female Pelvic Medicine and Reconstructive Surgeon as it relates to hysterectomy performed for repair of pelvic organ prolapse. In our initial work, we identified preoperative and intra-operative practices that were characteristic of high-volume pelvic reconstructive surgeons, and associated with decreases in morbidity in the peri-operative period. Ongoing work will determine if the practices more common in high volume surgeons are associated with improved surgical outcomes.

I am inaugural member of the AUGS Quality Improvement Outcomes Research Network (QI-ORN). The goal of this network is to provide data regarding quality of care in FPMRS, and to evaluate the gap in performance of previously determined quality metrics, and the development of new metrics that can be used to better characterize the performance of FPMRS surgeons.

I am also interested in the science behind local change. Evidence-based medicine continues to provide details regarding best practices for patient safety and quality, but incorporating these into pre-existing practice requires changes in workflow, and can affect the practice patterns of many different providers including physicians, nurse practitioners, nurses, medical assistants and others. I have been involved in work to integrate the use of blunt needles as a safety measure in pelvic and obstetric surgeries, establish a safe and effective same-day discharge protocol for patients undergoing vaginal hysterectomy, and create a protocol for postpartum care for patients sustaining 3<sup>rd</sup> and 4<sup>th</sup> degree perineal lacerations during childbirth. I have begun to develop a population health/management tool to provide electronic consultation to physicians referring patients with urgency incontinence that may not require a face-to-face office visit by a

urogynecologist. All of these projects which should optimize quality and safety of patient care require careful work to facilitate change.

As a new faculty member at UNC-Chapel Hill as of February 1, 2015, I am excited to work towards building a quality outcomes program in the Urogynecology Division. **Ultimately, my vision is to develop a quality outcomes research program which is dedicated to clarifying best practices and safety measures benefiting women who need care for pelvic organ prolapse and urinary incontinence.**

### **Teaching Statement**

Participating in medical education has been one of the most important, rewarding experiences of my career. As a fellow in Female Pelvic Medicine and Reconstructive Surgery, I participated in a concurrent Fellowship in Medical Education. This year-long program provided a foundation in curriculum development, the needs of adult learners, and the history of medical education in the United States. Upon completing these fellowships, I accepted a position at Massachusetts General Hospital, where I was soon appointed Associate Residency Director of the Combined Program in Obstetrics and Gynecology at Brigham and Women's and Massachusetts General Hospital. This program is comprised of 44 residents, 11 in each year of the program. In this role I learned a great deal about the administration of medical education, and at the same time was able to fine-tune **a philosophy of medical education and teaching centered around the provision of an environment conducive for learning, including the substrates of learner-appropriate clinical experiences, clear expectations for learning, and adequate support for learners including constructive feedback and coaching.** Although I thrived in the environment of resident teaching, the challenges of designing and implementing a new Fellowship in Female Pelvic Medicine and Reconstructive Surgery has proven to be one of my most exciting experiences.

The development of a didactic curriculum according to ACGME guidelines for the FPMRS fellowship resulted in the creation of a seminar-style hour long didactic on a weekly basis. To engage fellows as adult learners, each fellow occupied a unique role in the educational experience. First year fellows contributed basic details about surgical technique, anatomy, and patient care. Second year fellows provided critiques of current literature in the field. Third year fellows contributed a novel "question the practice" presentation, allowing them to ask questions to better understand "why we do what we do." Attending physicians provided expert input at all levels.

In the operating room, providing fellows graduated responsibility for more complex cases allows them to develop advanced skills and confidence as surgeons. Teaching decision making and leadership for operative emergencies or situations in which the expert must decide how to proceed helps fellows become responsible independent practitioners. For me, teaching in the operating room is often about diagnosis of the learner—understanding the individual developmental needs and deciding how to best facilitate this. In addition, the challenge of using verbal description to teach manual maneuvers is a skill I continue to develop.

Teaching in an outpatient clinic setting has multiple layers. Educating patients about their diagnoses and treatments requires attention to a patient's baseline educational level which affects their ability to grasp anatomic descriptions and understand the details of treatment. At the same time I educate patients I am also teaching residents or fellows about the scientific content of the patient diagnosis, as well as providing techniques and assessments for their approach to patient

education. In addition, education in the clinic setting must provide fellows with a sense of ownership and responsibility for the patients under their care.

As begin my work as a division director at UNC, I will focus my efforts on the mentoring of junior faculty in my division, and the creation and maintenance of an environment conducive to learning and inquiry within the division. Changes in the ways in which medicine is practiced and healthcare is delivered are sometimes viewed as a challenge to the environment of learning. I am committed to the education and mentoring of medical students, residents and fellows in the field of female pelvic medicine and reconstructive surgery.

#### **Service and Engagement Statement**

My long-term career goal is to improve outcomes for treatment of pelvic organ prolapse and stress urinary incontinence through identifying best practices in the field of Female Pelvic Medicine and Reconstructive surgery, and improving the quality and safety of care as these are adopted by the larger community of care providers. To achieve these goals, I have obtained excellent clinical and surgical training and a broad understanding of the issues of quality and safety in urogynecology. In my work at the University of North Carolina at Chapel Hill I will develop a meaningful quality and safety program at the local level within my division, and I will continue to be engaged at the national and international level in the understanding and development of best practices to optimize quality outcomes and safety for women with pelvic floor disorders. I will work actively to promote excellence in patient care and in the education of the next generation of female pelvic medicine and reconstructive surgeons.